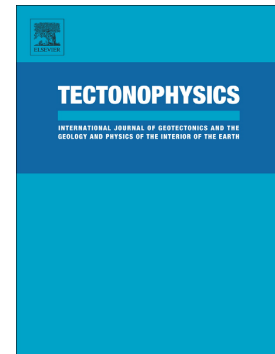


Accepted Manuscript

Lateral spreading of the middle to lower crust inferred from Paleocene migmatites in the Xolapa Complex (Puerto Escondido, Mexico): Gravitational collapse of a Laramide orogen?

T.A. Peña-Alonso, J. Estrada-Carmona, R.S. Molina-Garza, L. Solari, G. Levresse, C. LaTorre



PII: S0040-1951(17)30144-0
DOI: doi: [10.1016/j.tecto.2017.04.010](https://doi.org/10.1016/j.tecto.2017.04.010)
Reference: TECTO 127455

To appear in: *Tectonophysics*

Received date: 5 October 2016
Revised date: 4 April 2017
Accepted date: 9 April 2017

Please cite this article as: T.A. Peña-Alonso, J. Estrada-Carmona, R.S. Molina-Garza, L. Solari, G. Levresse, C. LaTorre , Lateral spreading of the middle to lower crust inferred from Paleocene migmatites in the Xolapa Complex (Puerto Escondido, Mexico): Gravitational collapse of a Laramide orogen?. The address for the corresponding author was captured as affiliation for all authors. Please check if appropriate. Tecto(2017), doi: [10.1016/j.tecto.2017.04.010](https://doi.org/10.1016/j.tecto.2017.04.010)

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Lateral spreading of the middle to lower crust inferred from Paleocene migmatites in the Xolapa Complex (Puerto Escondido, Mexico): Gravitational collapse of a Laramide orogen?

Peña-Alonso T.A.^{a,b,*}, Estrada-Carmona, J.^a, Molina-Garza, R.S.^a, Solari, L.^a, Levresse, G.^a, LaTorre, C.^a.

^a Centro de Geociencias, Universidad Nacional Autónoma de México, Blvd. Juriquilla No. 3001, Juriquilla, Querétaro, 76230, México.

^b Facultad de Ingeniería, Universidad Autónoma de Tamaulipas, Centro Universitario Tampico-Madero, Tampico, Tamaulipas, 89339, México.

* Corresponding author e-mail address: talonso@docentes.uat.edu.mx; topeax@gmail.com

Abstract

Field and laboratory studies including textural, petrological and geochronological analysis of migmatites of the Xolapa Complex affected by the same deformational event suggests that the deformation occurred during crystallization of neosome. The deformation represents sub-horizontal spreading of middle to lower crust according to structural data, and occurred during the Paleocene as inferred from U-Pb laser ablation dating of zircon. According to a compilation of stratigraphic, magmatic and deformational data reported in southern Mexico, the sub-horizontal spreading occurred after the culmination of the Upper Cretaceous Laramide orogeny. Compiled regional data indicate (a) coast-to-coast mass transfer in the upper crust from Zihuatanejo to Veracruz from the Cretaceous-Tertiary boundary until the mid-Eocene; (b) contemporaneous adakite-like magmatism; and (c) extension in the Mixteco and Oaxaca terranes of southern Mexico coeval to compression in the surrounding crust. Because all these observations are spatially associated to areas of the Mixteco and Oaxaca terranes, we propose that these areas experienced a post-orogenic gravitational collapse since the Cretaceous-Tertiary

Download English Version:

<https://daneshyari.com/en/article/5781511>

Download Persian Version:

<https://daneshyari.com/article/5781511>

[Daneshyari.com](https://daneshyari.com)